

REMARKS / DISCUSSION OF ISSUES

Claims 1-3 and 9-11 are pending in the application. Claim 4 is withdrawn. Claims 5-8 are canceled herein, without prejudice. The Applicants respectfully reserve the right to reintroduce subject matter deleted herein, either at a later time during the prosecution of this application or any continuing applications.

Applicant(s) thank(s) the Examiner for acknowledging the claim for priority and receipt of certified copies of all the priority document(s).

Reconsideration and allowance of the application in view of the following remarks are respectfully requested.

In the Office Action, claims 1-3 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,882,827 (Nakao) in view of U.S. Patent No. 6,045,954 (Dai). Claim 2 is rejected under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2005/0170290 (Dejima) in view of Dai. It is respectfully submitted that claims 1-3 and 9-10 are patentable over Nakao, Dai and Dejima for at least the following reasons.

As a first matter, it is respectfully submitted that Dejima is not prior art to the present application. The present application was PCT filed on June 13, 2003 and claims the benefit of a European Patent Application filed on July 2, 2002 in the English language, which is thus the effective filing date of the present application.

It is respectfully submitted that as the effective filing date of the present application of July 2, 2002 is before the Dejima U.S. filing date of May 18, 2004, Dejima is not available as prior art with regard to the present application. In fact,

Dejima's filing date does not even predate the present application PCT filing date of June 13, 2003 and accordingly, is not prior art based on the PCT filing date alone.

With respect to the available prior art, Nakao is directed towards a phase shift mask that has phase shift portions of both Levenson type and Halftone type. The Office Action states on page 2, and the Applicants agree, that Nakao does not teach that the half tone layer comprises silicon nitride. Dai is introduced in an attempt to cure the deficiencies in Nakao.

Dai is directed towards a half tone phase shift mask material having a layer of nitrogen rich silicon nitride (Abstract). In Dai, the "resulting films will be nitrogen rich in that the atomic concentration of nitrogen will exceed the stoichiometric value of 0.57 by between about 57 and 60%" (col. 3, lines 63-66). Dai shows the silicon nitride layer having a transmittance of between 4% and 15% (col. 4, lines 18-22, and 25-30).

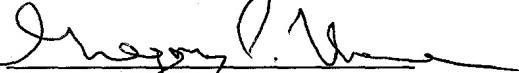
It is respectfully submitted that the system of claim 1 is not anticipated or made obvious by the teachings of Nakao and/or Dai. There is no disclosure or suggestion in Nakao, Dai, and combinations thereof of the present invention which, amongst other patentable elements, requires (illustrative emphasis provided) "wherein the half-tone mask material is silicon-rich silicon nitride  $\text{SiN}_x\text{:H}$  with x in the range 0 to 1, and wherein a thickness of the half-tone layer and x are selected to provided a transmittance in the range of 20% to 80%" as recited in claim 1.

Based on the foregoing, the Applicants respectfully submit that independent Claim 1 is patentable over Nakao and/or Dai and notice to this effect is earnestly solicited. Claims 2-3 and 9-11 depend from Claim 1 and accordingly are allowable for at least

this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration and allowance of each of the dependent claims is respectfully requested.

In view of the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Gregory L. Thorne  
Reg. 39,398  
Att'y for Applicant(s)

**THORNE & HALAJIAN, LLP**  
Applied Technology Center  
111 West Main Street  
Bay Shore, NY 11706  
Phone: (631) 665-5139  
Fax: (631) 665-5101